

**REMARKS**

Applicants thank the Examiner for the courtesy extended to Applicant's representative during an interview on April 29, 2003. During the interview, Applicants requested the Examiner to reconsider the withdrawal of claim 24 from examination. The Examiner maintained that claim 24 was properly withdrawn as being drawn to a non-elected invention. No agreement was reached.

Also during the interview, the Examiner suggested that the Applicants consider defining the angle between the heat receiving face and the pillar-type protrusions as an oblique angle. The term oblique angle is understood to mean an angle which is neither parallel nor perpendicular. See, Webster's II New Riverside Dictionary, Revised Edition, 1996, a copy is herein attached.

**I. Introduction**

Claims 1, 4-9, 15, 17, 9-21, 23 and 25-33 are pending in the above application.

Claim 31 stands objected to for a minor typographical error.

Claims 1, 5, 6, 9, 25, 26, 28 and 30-32 stand rejected under 35 U.S.C. § 102.

Claims 4, 7, 8, 15, 17, 19-21, 23, 27, 29 and 33 stand rejected under 35 U.S.C. § 103.

Claims 1, 15, 24, 29, 30, 32 and 33 are independent claims.

**II. Amendments**

Claims 2, 16, 22 and 24 have been cancelled without prejudice or disclaimer.

Claims 1, 15, 29, 30, 32 and 33 have been amended to recite an oblique angle as suggested by the Examiner. Claim 6 has been amended to conform to the amendments of claim 1.

Claim 31 has been amended to correct a minor typographical error as suggested by the Examiner. The objection to claim 31 is believed to be fully addressed.

No new matter has been added.

### **III. Prior Art Rejection**

A. Claims 1, 5, 6, 9, 25, 26, 28 and 30-32 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by Arnold et al. (U.S. Pat. 4,823,869) (hereafter "Arnold").

Anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a prior art reference as arranged in the claim. See, C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1349, 48 U.S.P.Q.2D (BNA) 1225 (Fed. Cir. 1998); and Connell v. Sears, Roebuck & Co., 220 USPQ 193, 198 (Fed. Cir. 1983).

Arnold does not disclose a cooling apparatus having a plurality of pillar-type protrusions provided on at least one face other than the heat receiving face of a column in such a manner that they are at a predetermined oblique angle against the heat receiving face. Arnold discloses to place the fins perpendicular to the heat receiving face. Hence, Arnold does not disclose each and every limitation of the above amended claims and does not anticipate the above amended claims.

B. Claims 4, 8, 15, 17, 19-21, 23, 27, 29 and 33 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Arnold in view of Lin (U.S. Patent 5,740,014).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the *claimed invention* where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Ecolchem Inc. v. Southern California Edison Co., 227 F.3d 1361, 56 U.S.P.Q.2d (BNA) 1065 (Fed. Cir. 2000); In re Dembiczak, 175 F.3d 994, 999, 50 U.S.P.Q.2D (BNA) 1614, 1617 (Fed. Cir. 1999); In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992). See also MPEP 2143.01.

Neither Arnold nor Lin, taken alone or in combination, disclose or suggest all the limitations of amended independent claims 1, 15, 29 or 33. Arnold does not disclose or suggest a cooling apparatus having a plurality of pillar-type protrusions provided on at least one face other than the heat receiving face of the column in such a manner that they are at a predetermined oblique angle against the heat receiving face as discussed above. Lin also does not disclose or suggest such. Claims 4 and 8 depend upon claim 1 and contain all of the limitations therein. Hence, even assuming *arguendo* that the combination of Lin with Arnold were proper, the combination of Arnold and Lin does not disclose or suggest all of the limitations of above claims 4, 8, 15, 17, 19-21, 23, 27, 29 or 33. Hence, the combination of Arnold and Lin does not render the above claims unpatentable.

C. Claim 7 stands rejected under 35 U.S.C. § 103 (a) as being unpatentable over Arnold in view of Higgins III (U.S. Patent 5,132,780).

Neither Arnold nor Higgins III, taken alone or in combination, disclose or suggest all the limitations of amended independent claim 1. Arnold does not disclose or suggest a cooling

apparatus having a plurality of pillar-type protrusions provided on at least one face other than the heat receiving face of the column in such a manner that they are at a predetermined oblique angle against the heat receiving face as discussed above. Higgins III also does not disclose or suggest such. Hence, even assuming arguendo that the combination of Higgins III with Arnold were proper, the combination of Arnold and Higgins III does not disclose or suggest all of the limitations of the above claim. Hence, the combination of Arnold and Higgins III does not render claim 7 unpatentable.

#### IV. Conclusion

The above application is considered to be in condition for allowance, an early notification thereof is respectfully requested. The Examiner is respectfully requested to contact the undersigned attorney to resolve any formal issues that may prevent an early notice of allowance.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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